ASSIGNMENT 12

Textbook Assignment: "Weather Observation (continued)," and "The Ship's Bridge," chapters 10 and 11, pages 10-15 through 11-8.

12-1. Which of the following conditions would mark the passage of a warm front?

1. Pressure usually rises
2. Wind will advance from the southeast, shifting to southwest
3. Rapid temperature change
4. Decreased visibility

12-2. What is the maximum distance clouds will start to define themselves prior to the passage of a warm front?

1. 50 mi
2. 100 mi
3. 500 mi
4. 1,000 mi

12-3. What type of clouds accompanies a warm front?

1. Low range
2. Mid range
3. High range
4. Each of the above

12-4. Where are cold fronts located?

1. In well-deemed pressure troughs
2. In shallow pressure troughs
3. Originally in northern regions
4. Between two air masses of the same temperature

12-5. How will the pressure react in advance of a cold front?

1. Steady or unsteady fall
2. Steady or unsteady rise
3. Remain the same

12-6. From what direction will the wind first approach during a cold front?

1. North or northeast
2. South or southeast
3. East or southeast
4. West or southwest

12-7. What type of clouds is likely to form in advance of a cold front?

1. Towering cumulus
2. Cumulonimbus
3. Stratocumulus
4. Each of the above

12-8. Which of the following conditions would mark the passage of a cold front?

1. Rise in temperature
2. Decreased visibility
3. Gradual clearing of the sky
4. Fairly rapid wind shift

12-9. What type of front is the result of a warm and cold front converging?

1. Warm
2. Cold
3. Occluded
4. Predominant

12-10. With regard to occluded fronts, the most violent weather occurs on the upper front for a distance of how many miles north of the northern tip of the warm sector?

1. 25 to 50
2. 50 to 75
3. 50 to 100
4. 50 to 150

12-11. Your ship is heading 180° at 17 knots, and the true wind is blowing from the south at 5 knots. What is wind speed?

1. 5 kn
2. 12 kn
3. 17 kn
4. 22 kn

12-12. Which of the following equipment measures wind speed?

1. Psychrometer only
2. Synchronometer
3. Anemometer only
4. Psychrometer or anemometer

IN ANSWERING QUESTIONS 12-13 THROUGH 12-16, SELECT THE DESCRIPTION FROM COLUMN B THAT MATCHES THE WIND DATA IN COLUMN A.

A. WIND DATA		B. DESCRIPTION
12-13.	True	1. Observed & computed in nautical miles to the nearest whole knot
12-14.	Relative	2. Direction the wind is blowing
12-15.	Apparent	3. AW = RW + SH
12-16.	Speed	4. Wind measured from the ship's heading

12-17. Which of the following is NOT a method for gathering wind data?

1. Visual estimation
2. Wave timing
3. Installed anemometer
4. Hand-held anemometer

12-18. Where is the anemometer usually located?

1. On the masthead
2. On the yardarm
3. Above the bridge
4. Above the pilot house

12-19. What type of wind is measured by the anemometer?

1. Relative
2. True
3. Apparent
4. Actual

12-20. When a ship has two anemometers, which should be used to measure wind direction?

1. The one on the leeward side
2. The one on the windward side
3. The anemometer that reads higher
4. Both, by taking the average of the two

12-21. What is the maximum wind speed a synchro repeater will indicate?

1. 75 kn
2. 100 kn
3. 150 kn
4. 175 kn

12-22. What is the maximum wind speed a hand-held anemometer can indicate?

1. 50 kn
2. 60 kn
3. 75 kn
4. 100 kn

12-23. The hand-held anemometer is as equally accurate as the installed anemometer.

1. True
2. False

12-24. What data should you consider to arrive at an estimated true wind speed?

1. The limited fetch area
2. Swell waves from constant directions
3. Waves running into shallow water
4. Offshore winds within sight of land

12-25. Which of the following factors will cause the speed estimation of wind to be too high?

1. Waves running into shallow water
2. Obscure flags
3. Smoke and rigging
4. All of the above

IN ANSWERING QUESTIONS 12-26 THROUGH 12-32, SELECT THE BREEZE FROM COLUMN B THAT MATCHES THE CHARACTERISTICS IN COLUMN A. RESPONSES MAY BE USED MORE THAN ONCE.

A. CHARACTERISTICS		B. BREEZE
12-26.	Small waves	1. Gentle
12-27.	11-16 knots	2. Moderate
12-28.	4-6 knots	3. Fresh
12-29.	Moderate waves	4. Light
12-30.	Large wavelets	
12-31.	Short wavelets	
12-32.	17-21 knots	

IN ANSWERING QUESTIONS 12-33 THROUGH 12-39, SELECT THE DESCRIPTION FROM COLUMN B THAT MATCHES THE CHARACTERISTIC IN COLUMN A. RESPONSES MAY BE USED MORE THAN ONCE.

	A. CHARACTERISTIC	B. DESCRIPTION
12-33.	34-40 kn	1. Gale
12-34.	64 + kn	2. Near gale
12-35.	48-55 kn	3. Storm
12-36.	Sea Heaps Up	4. Hurricane
12-37.	Moderate high waves	
12-38.	Very high waves	
12-39.	Air filled with foam and spray	

12-40. In Celsius, what is the freezing point of water?

1. -15°
2. -10°
3. 0°
4. 5°

12-41. In Celsius, what is the boiling point of water?

1. 90°
2. 95°
3. 100°
4. 110°

12-42. A temperature of 72°F is equivalent to what Celsius temperature?

1. 161.6°
2. 62.3°
3. 57.7°
4. 22.2°

12-43. A temperature of 54.8C is equivalent to what Fahrenheit temperature?

1. 134.6°
2. 132.6°
3. 130.6°
4. 128.6°

12-44. What is the relative humidity when the amount of water vapor in the air has reached the saturation point?

1. 100%
2. 50%
3. 0%
4. Impossible to determine without knowing the air temperature

12-45. What instrument is used to determine relative humidity and dewpoint?

1. Psychrometer
2. Anemometer
3. Aneroid barometer
4. Synchro repeater

12-46. The difference between the wet-bulb and the dry-bulb thermometer readings is used to determine which of the following data?

1. Relative humidity
2. Maximum temperature
3. Diurnal variation
4. Minimum temperature

12-47. When you are using a sling psychrometer, in which of the following positions should you be standing?

1. In direct sunlight facing the wind
2. In a shaded area facing the wind
3. In direct sunlight away from the wind
4. In a shaded area away from the wind

12-48. At which of the following circulating air temperatures should you energize the ventilation fan of the electric psychrometer?

1. 49°F
2. 59°F
3. 62°F
4. 70°F

12-49. If the air temperature is 50°F and the relative humidity is 100 percent, what is the dewpoint?

1. 100°F
2. 80°F
3. 60°F
4. 50°F

12-50. The difference between the dry-bulb and wet-bulb readings is called "the wet-bulb depression."

1. True
2. False

IN ANSWERING QUESTION 12-51, REFER TO TABLE 10-2 IN YOUR TEXT.

12-51. What is the dewpoint if the wet-bulb temperature is 62°F and the dry-bulb temperature is 69°F?

1. 65°F
2. 58°F
3. 53°F
4. 47°F

12-52. When under way, how close must ships be in order for the OTC to designate a weather reporting ship?

1. 5 mi
2. 10 mi
3. 15 mi
4. 20 mi

12-53. When a ship in the close proximity of other ships has been designated the weather observation and reporting guard ship, what information, if any, must the exempted ships note on their weather observation forms?

1. Name of the OTC and effective dates/times
2. Name of the guard ship and effective dates/times
3. Name of the port and closest U.S. manned weather reporting activity
4. None

12-54. When CNOC 3140/8 is used, what part is used for Synoptic Code Message Format?

1. I
2. II
3. III
4. IV

12-55. The duplicate copy of the weather observation form must be retained on board for what length of time?

1. 1 yr
2. 2 yr
3. 3 yr
4. 6 mo

12-56. Entries should be made on the weather observation form with what type of marker?

1. Black ball point pen
2. Blue ball point pen
3. No. 2 lead pencil
4. No. 3 lead pencil

12-57. If an error is discovered after the encoded data from a weather observation form has been transmitted, how should you correct it?

1. Draw a red pencil line through the erroneous data and enter the correct data above it
2. Erase the erroneous data and enter the correct data
3. White out the erroneous data and enter the correct data
4. Draw a black ball-point pen line through the erroneous data and enter the correct data above it

12-58. Which of the following times will be the first entry of a new day on the weather observation form?

1. 0000 GMT
2. 0000 LMT
3. 2356 GMT
4. 2359 ZT

12-59. Which of the following observation designators should be entered in column 1 of the weather observation form for an observation that is taken between hourly observations?

1. SA
2. L
3. SP
4. RS

12-60. When you are filling out the date column of the weather observation form, which of the following entries should be used?

1. 26 OCTOBER 1985
2. OCTOBER 26 1985
3. 1985 OCT 26
4. 26 OCT 1985

12-61. Which of the following entries should be used to record a barometer reading of 1006.8 millibars on the weather observation form?

1. 06.8
2. 006.8
3. 068
4. 1006.8

12-62. Which of the following entries should be entered in column 12 of the weather observation form for a sea level barometer reading of 1023.8 millibars?

1. 023
2. 23.8
3. 238
4. 1023

12-63. How often and by what precedence must ships transmit weather observations when the surface winds are greater than 34 knots?

1. Every 6 hours, priority
2. Every 6 hours, immediate
3. Every 3 hours, priority
4. Every 3 hours, immediate

IN ANSWERING QUESTIONS 12-64 AND 12-65, SELECT THE FUNCTION FROM COLUMN B THAT MATCHES THE EQUIPMENT IN COLUMN A. NOT ALL RESPONSES ARE USED.

	A. EQUIPMENT	B. FUNCTION
12-64.	Helm Unit	1. The steering wheel in secondary conn
12-65.	Lee Helm	2. Means by which speed changes are transmitted
		3. Means by which the ship is steered

12-66. How often are steering pumps switched?

1. Every watch
2. Every 12 hr
3. Every 24 hr
4. Every other day

12-67. When is a master helmsman used?

1. In restricted waters
2. During replenishment
3. When entering DR leaving port
4. All of the above

IN ANSWERING QUESTIONS 12-68 THROUGH 12-71, SELECT THE DEFINITION FROM COLUMN B THAT MATCHES THE TERM IN COLUMN A. RESPONSES ARE USED ONLY ONCE.

	A. TERM	B. DEFINITION
12-68.	Tactical Diameter	1. Distance run on the original course until track interception
12-69.	Turning Circle	2. Distance gained left or right after a 180° turn
12-70.	Advance	3. Distance gained toward a new course
12-71.	Transfer	4. Path followed by the pivot point when making a 360° turn

---

12-72. What is a ship's pivot point?

1. A point on the center line
2. A point on which the ship turns when rudder is applied
3. Located about one-third the ship's length from the bow
4. All of the above

12-73. Which of the following diameter maneuvers is the distance 90° to the original course measured from 180° to 360°?

1. Final Diameter
2. Turning Diameter
3. Standard Tactical Diameter
4. Angle of Turn

12-74. Standard rudder is the amount of rudder angle used to make the ship turn in the standard tactical diameter.

1. True
2. False

12-75. Which fact best describes kick?

1. Side force
2. Swirl of water inside of the turn when the rudder is applied
3. Swirl of water outside of the turn when the rudder is applied
4. Making a wide turn so the stern is kicked out